

What is claimed is:

1 1. A method for assembling carbon particles into at least one fiber, the method
2 comprising the steps of:
3 aligning said carbon particles by flowing a mixture of said carbon molecules and a
4 curable liquid down a tapering tube starting at a first end of said tapering tube; and
5 curing said flowing mixture at least near a second end of said tapering tube
6 whereby a fiber is formed.

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1 2. The invention as defined in claim 1 further comprising the step of dispersing
2 said carbon particles within said curable liquid to form said mixture.

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1 3. The invention as defined in claim 1 wherein said curable liquid cures, at least in
2 part, in the presence of ultraviolet light.

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1 4. The invention as defined in claim 1 further comprising the step of heating said
2 fiber so as to cause at least some volatile elements therein to substantially dissipate
3 therefrom.

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1 5. The invention as defined in claim 1 further comprising the step of twisting said
2 fiber.

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1 6. The invention as defined in claim 1 further comprising the step of increasing
2 the density of said fiber.

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1 7. The invention as defined in claim 1 comprising the step of heating said fiber.

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1 8. The invention as defined in claim 1 comprising the step of sintering at least
2 some of said carbon particles within said fiber.

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1 9. The invention as defined in claim 1 comprising the step of cladding said fiber.

1 10. The invention as defined in claim 1 comprising the step of spooling said fiber
2 onto a take-up drum.

1 11. The invention as defined in claim 1 wherein said curable liquid is comprises
2 at least one of the group consisting of:

3 (i) a copolymer of (a) methylmethacrylate with (b) the ester of methacrylic acid
4 and anthaceyl methanol; and

5 (ii) PS2067.

1 12. The invention as defined in claim 1 wherein carbon particles comprise at least
2 carbon nanotube molecules.

1 13. The invention as defined in claim 1 wherein carbon particles comprise at least
2 carbon fibrils.

1 14. A fiber produced by the process defined in claim 1.

1 15. The invention as defined in claim 1 wherein said curing step is performed, at
2 least in part, by shining ultraviolet light upon said mixture.

1 16. The invention as defined in claim 1 wherein said curing is performed at least
2 in part while said mixture remains within said tapering tube.

1 17. The invention as defined in claim 1 wherein said tapering tube has a portion
2 that is at least partially translucent to ultraviolet light.

1 18. The invention as defined in claim 1 wherein said curing is performed at least
2 in part after said mixture has exited from said tapering tube.

1 19. A method for assembling carbon particles into at least one aligned fiber, the
2 method comprising the step of passing a curable liquid containing carbon through a
3 tapering tube, whereby said carbon particles become substantially aligned.

1 20. The invention as defined in claim 19 wherein said carbon particles are carbon
2 nanotube molecules.

1 21. The invention as defined in claim 19 wherein said carbon particles are carbon
2 fibrils.

1 22. A carbon particle fiber comprising carbon particles that were aligned at least
2 in part by being flowed through a tapering tube as part of a curable liquid.

1 23. The invention as defined in claim 22 wherein said carbon particles are carbon
2 nanotube molecules.

1 24. The invention as defined in claim 22 wherein said carbon particles are carbon
2 fibrils.

1 25. A carbon particle fiber comprising substantially only aligned carbon particles
2 that were aligned at least in part while intermixed within a carrier substance.

1 26. The invention as defined in claim 25 wherein said carbon particles are carbon
2 nanotube molecules.

1 27. The invention as defined in claim 25 wherein said carbon particles are carbon
2 fibrils.

1 28. A method for assembling carbon particles into at least one fiber, the method
2 comprising the steps of:

3 aligning said carbon particles by flowing a mixture of said carbon molecules and a
4 curable liquid down a tapering tube starting at a first end of said tapering tube;

5 curing said flowing mixture at least near a second end of said tapering tube using
6 ultraviolet light whereby a fiber is formed;

7 heating said fiber so as to cause any volatile elements from said solidified curable
8 liquid to substantially dissipate from said fiber;

9 twisting said fiber to increase its density; and

10 heating said fiber to sinter said carbon particles within said fiber.

1 29. The invention as defined in claim 28 further comprising the step of cladding
2 said fiber.

1 30. The invention as defined in claim 28 wherein said carbon particles are carbon
2 nanotube molecules.

1 31. The invention as defined in claim 28 wherein said carbon particles are carbon
2 fibrils.